

CLAIMS

We claim:

1. Apparatus for positioning or removing a femoral knee prosthesis having first and second condylar portions, each said condylar portion having an articulating surface extending proximally to distally, a superior surface for engagement with a prepared surface at the distal end of a femur, each of said condylar portions having an inner edge between its said articulating surface and superior surface, said inner edges defining a gap, said apparatus comprising
 - (a) an elongated housing extending from a distal end to a proximal end;
 - (b) a passageway extending through said housing along an axial path;
 - (c) a condylar engagement member at the distal end of said housing, said member having a first condylar engagement surface and a second condylar engagement surface spaced from said first condylar engagement surface, said condylar engagement member having an aperture between said first and second condylar engagement surfaces; and
 - (d) a post positioned in said passageway for axial movement therein and extending through said condylar engagement member, said post having an outwardly extending flange at its distal end, said flange having first and second edges spaced apart to define a breadth smaller than said gap and first and second ends spaced apart to define a length greater than said gap.
2. Apparatus of claim 1 wherein said housing, condylar engagement member, post and flange may be rotated from a first position in which said breadth is aligned to permit movement of said flange through said gap to a second position in which said length spans said gap to align said first and second ends with said superior surface on opposite sides of said gap.

3. Apparatus of claim 1 wherein said post has threads spaced from said flange and further including a rotatable handle threadedly engaged to said threads, rotation of said handle moving said flange toward or away from said condylar engagement member.

5

4. Apparatus of claim 3 further including means to prevent rotation of said post in said housing.

5. Apparatus of claim 3 further including a longitudinally extending slot in said post and an abutment extending from a fixed position on said housing and into said slot to prevent rotation of said post in said housing while permitting axial movement of said post in said passageway.

6. Apparatus of claim 3 wherein said handle has a proximal end spaced from said housing, said proximal end having a diagonally extending slot for receiving a tool, said slot being undercut to define at least one tool retention surface.

7. Apparatus of claim 3 wherein said handle has a proximal end spaced from said housing, said proximal end having a diagonally extending abutment at said proximal end for receiving a tool, said abutment including at least one flange spaced from said proximal end for retaining said tool.

8. In combination:

25 (A) a femoral knee prosthesis having first and second condylar portions, each said condylar portion having an articulating surface extending proximally to distally, a superior surface for engagement with a prepared surface at the distal end of a femur, each of said condylar portions having an inner edge between its said articulating surface and superior surface, said inner edges defining a gap; and

30 (B) apparatus for positioning or removing said femoral knee prosthesis, said apparatus comprising;

(a) an elongated housing extending from a distal end to a proximal end;

(b) a passageway extending through said housing along an axial path;

5 (c) a condylar engagement member at the distal end of said housing, said member having a first condylar engagement surface and a second condylar engagement surface spaced from said first condylar engagement surface, said condylar engagement member having an aperture between said first and second condylar engagement surfaces; and

10 (d) a post positioned in said passageway for axial movement therein and extending through said condylar engagement member, said post having an outwardly extending flange at its distal end, said flange having first and second edges spaced apart to define a breadth smaller than said gap and first and second ends spaced apart to define a length
15 greater than said gap, said flange movable through said gap when said first and second edges are aligned with said gap and engaged with first and second ends contacting said superior surface on opposite sides of said gap following rotation of said post.

20 9. The combination according to claim 8 wherein said knee prosthesis is provided with a recess at the juncture of each of said inner edges with the adjacent portion of said superior surface, said first and second ends each positioned in one of said recesses.

25 10. The combination of claim 8 wherein said post has threads spaced from said flange and further including a rotatable handle threadedly engaged to said threads, rotation of said handle moving said flange toward or away from said condylar engagement member.

30 11. The combination of claim 10 further including means to prevent rotation of said post in said housing.

12. The combination of claim 8, further including a longitudinally extending slot in said post and an abutment extending from a fixed position on said housing and into said slot to prevent rotation of said post in said housing while permitting axial movement of said post in said passageway.

5

13. The combination of claim 8 wherein said handle has a proximal end spaced from said housing, said proximal end having a diagonally extending slot for receiving a tool, said slot being undercut to define at least one tool retention surface.

10

14. The combination of claim 8 wherein said handle has a proximal end spaced from said housing, said proximal end having a diagonally extending abutment at said proximal end for receiving a tool, said abutment including at least one flange spaced from said proximal end for retaining said tool.

15

15. A method for positioning or removing a femoral knee prosthesis having first and second condylar portions, each said condylar portion having an articulating surface extending proximally to distally, a superior surface for engagement with a prepared surface at the distal end of a femur, each of said condylar portions having an inner edge between its said articulating surface and superior surface, said inner edges defining a gap, comprising the steps of

(a) providing an instrument for gripping said knee prosthesis, said instrument having:

20

25

(i) an elongated housing extending from a distal end to a proximal end;

(ii) a passageway extending through said housing along an axial path;

30

(iii) a condylar engagement member at the distal end of said housing, said member having a first condylar engagement surface and a second condylar engagement surface spaced from said first condylar

engagement surface, said condylar engagement member having an aperture between said first and second condylar engagement surfaces; and

(iv) a post positioned in said passageway for axial movement therein and extending through said condylar engagement member, said post having an outwardly extending flange at its distal end, said flange having a first and second edges defining a breadth smaller than said gap and first and second ends defining a length greater than said gap;

(b) moving said flange through said gap;

(c) rotating said instrument including said post to a position such that said flange spans said gap;

(d) engaging said first condylar engagement surface to said first condylar portion articulating surface and said second condylar engagement surface to said second condylar portion articulating surface; and

(e) moving said post axially to thereby engage said flange to said superior surface on opposite sides of said gap.

16. The method of claim 15 wherein said instrument includes a rotatable handle threadedly engaged to said post and further including the step of rotating said handle to move said flange toward said condylar engagement surfaces.

17. The method of claim 16 further including the step of restraining said post from rotation while rotating said handle.

18. The method of claim 16 further including the step of providing at least one engagement abutment on said handle and engaging an instrument to said abutment.

19. The method of claim 15 further including the steps of providing a first recess at the juncture one of said inner edges and said superior surface, a second recess at the juncture of the other of said inner edges and said superior surface and positioning said flange first end in said first recess

and said flange second end in said second recess following the step of moving said flange through said gap.